

REMARKS

Claims 2-8, 10-17, and 25-33 are pending in the present application. Claims 8, 14-17, 25-27, and 29-31 have been rejected under 102(e) as being anticipated by Dening et al. 6,525,611 (Dening). Claims 8, 14-17, and 25 are rejected under 102(b) as being anticipated by Kashima 6,069,528 (Kashima). Claims 13, 28, 32, and 33 have been rejected under 103(a) as unpatentable over Dening in view of French 5,510,753 (French). Claims 13, 26-28, and 32-33 have been rejected under 103(a) as unpatentable over Kashima in view of French. Claims 2-8, 10-12, 25-27, and 29-30 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of US Patent 6,828,859. Claims 2-7 and 10-12 would be allowable if rewritten in independent form.

Rejections Based on Dening

In response to the prior art rejection based on Dening et al., a § 1.131 declaration of Timothy J. Dupuis is attached, including a disclosure document (with dates redacted) that is dated prior to August 1, 2001, the filing date of Dening. Applicant believes that the attached declaration removes Dening as prior art, making the rejections based on Dening moot.

Double Patenting Rejections

A Terminal Disclaimer, and the required fee, are included with this response.

Prior Art Rejections

Independent claims 25 and 14 have been rejected under 102(b) as being anticipated by Kashima. Amended claim 25 recites a circuit for protecting devices in an RF power amplifier including "a power detector coupled to the output of the RF power amplifier for detecting the output power of the RF power amplifier," "a peak detector coupled to one or more critical nodes in the RF power amplifier for detecting peak voltages at the one or more critical nodes," and "power control circuitry coupled to the power detector and to the peak detector for controlling the output power of the power amplifier, wherein the power control circuitry protects devices in the RF power amplifier by decreasing the gain of the power amplifier when the peak detector detects a voltage above a voltage threshold at the one or more critical nodes in the RF power amplifier."

One advantage of the circuit recited in claim 25 is that devices in the RF power amplifier can be protected from excess voltages, even when power control circuitry might otherwise increase the output power of the power amplifier. For example, referring to the flowchart of FIG. 2, both the output power and at least one peak voltage is detected (steps 2-10 and 2-12). As shown, the amplifier gain is decreased (step 2-20) if either the output power is greater than the requested power (step 2-14), or if the peak voltage is greater than a threshold voltage (step 2-16). Similarly, the amplifier gain is only increased (step 2-18) if both the requested power is less than the requested power AND the peak voltage is less than the threshold voltage.

Applicants submit that Kashima does not teach or suggest the invention recited in amended claim 25. Kashima describes a gain control device for an amplifier that uses a directional coupler to sense the output power of the amplifier, and adjusts the power of the

amplifier accordingly. However, Kashima does not appear to teach or suggest a circuit for protecting devices in an amplifier, as recited in claim 25. For at least these reasons, applicants submit that claim 25 is allowable over Kashima. Since claims 2-8 and 26-31 depend from claim 25, it is also believed that these claims are also allowable over Kashima.

Amended claim 14 recites a method of protecting devices in an RF power amplifier including "detecting a peak voltage at a first node of the power amplifier", "detecting the output power of the power amplifier," "determining whether the detected peak voltage is higher than a threshold voltage," and "if it is determined that the detected peak voltage is higher than the threshold voltage, decreasing the gain of the power amplifier, even if the detected output power is less than a desired output power level."

Applicants submit that Kashima does not teach or suggest the invention recited in amended claim 14. Kashima does not teach or suggest a method of protecting devices by detecting a peak voltage at a first node, detecting the output power of the power amplifier, and decreasing the gain of the power amplifier in response to the detection of a peak voltage, even if the detected output power is less than a desired output level. In fact, the purpose of Kashima is to control the output power of an amplifier to maintain a desired output power level. For at least these reasons, and for the reasons discussed above, applicants submit that claim 14 is allowable over Kashima. Since claims 16 and 17 depend from claim 14, it is also believed that these claims are also allowable over Kashima.

Independent claim 32 has been rejected under 103(a) as unpatentable over Kashima in view of French. The Examiner argues that French describes an alternative to sensing the peak

voltage at the output of a power amplifier, that is, to sense the peak voltage at the input of the power amplifier.

Amended claim 32 recites a circuit comprising "an RF power amplifier having an input and an output," "a power detector coupled to the output of the RF power amplifier for detecting the output power of the RF power amplifier," "a peak detector coupled to the power amplifier for detecting a peak voltage at a node of the power amplifier, wherein the node is a node other than the output of the power amplifier," and "power control circuitry coupled to the peak detector and to the power amplifier for controlling the gain of the power amplifier, wherein the power control circuitry limits the power at the output of the power amplifier when the peak detector detects a peak voltage greater than a threshold voltage."

Applicants submit that the Kashima in view of French does not make claim 32 unpatentable, for reasons similar to those set forth above with respect to claims 25 and 32. In addition, there is no motivation or suggestion in Kashima or French to combine the references. For at least these reasons, applicants submit that claim 32 is allowable over Kashima in view of French. Since claims 10-13 and 33 depend from claim 32, it is also believed that these claims are also allowable over Kashima in view of French.

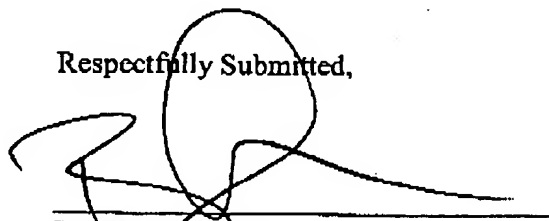
Should there remain unresolved issues that require adverse action, it is respectfully

requested that the Examiner telephone Bruce A. Johnson, Applicants' Attorney at 512-301-9900 so that such issues may be resolved as expeditiously as possible.

6-29-05

Date

Respectfully Submitted,



Bruce A. Johnson
Reg. No. 37361
Attorney for Applicant(s)

Customer No. 30163
Bruce A. Johnson
Johnson & Associates
PO Box 90698
Austin, TX 78709-0698
Tel. 512-301-9900
Fax 512-301-9915